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New distributional record of a less known species *Euphorbia venkatarajui* to flora of Telangana state, India

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ABSTRACT

Euphorbia venkatarajui Sarojin., is reported from the rocky area of Wazirabad village, Damaracherla Mandal, Nalgonda District of Telangana State and forms a new distributional record for the state of Telangana. It is being described along with field photographs to make an easy identification.

Keywords: Euphorbia, New record, Rocky areas, Telangana, India.

1. INTRODUCTION

The genus *Euphorbia* is the sixth largest genus among flowering plants, consisting of around 2,000 species and occurring throughout the world predominantly in tropical, subtropical and warm temperate regions/ The member of Euphorbiaceae are widely distributed all around the world and mostly distributed in arid and semiarid regions (Horn *et al.*, 2012). In India, the genus is represented by 84 species (Binojkumar and Balakrishnan 2010) and the addition of *Euphorbia kadapensis* Sarojin. & R.R.V. Raju (2014), *E. gokakensis* S.R. Yadav, Malpure & Chandore (2016), *E.seshachalamensis* Prasad & Prasanna (2016) and *Euphorbia venkatarajui* Sarojin (2017). The morphological diversity of members succulents, xerophytes, geophytes, trees, shrubs, herbs, and a variety of species are all found in this genus. (Dorsey *et al.*, 2013). The genus is well known for its succulent species, which resemble cacti. It is the largest genus of the family, with 34 endemic species in India alone. The euphorbia species are characterized by herbs, shrubs, sometimes succulents, milky latex. Leaves are alternate, opposite, or whorled, persistent to deciduous, sometimes caducous; stipules present or absent, sometimes represented by glands; blade simple to lobed, usually pinnately veined, eglandular. Plants monoecious or dioecious; inflorescence a bisexual (rarely unisexual) pseudanthium (cyathium); cyathea borne in terminal or axillary dichasia or pleiochasia, d; perianth of 3-6, styles free or basally connate, bifid or rarely entire; ovary glabrous or pubescent, fruit capsular. The newly formed state of Telangana so far reported by 21 species (Reddy & Reddy, 2016) & 27 (Pullaiah, 2015).

2. MATERIALS AND METHODS

The intensive and extensive floristic surveys were conducted from the past two years in Nallagonda District from 2019-2021. The authors collected few interesting specimens of *Euphorbia* in the flowering and fruiting stage, and the specimens were preserved in the form of Herbarium according to standard methodology (Jain and Rao 1977). In the field, the plant's complete phenological record, habitat, allied species, soil type, geographical coordinates, and elevation were all recorded. By the using of Nikon d 5300 camera specimen photographs were taken and microscopic observations for critical studies using a microscope. The specimen was preserved in the All-India Network Project on Vertebrate Pest Management (AINPVPM) of Professor Jayashankar Telangana state, Agricultural University, Rajendranagar, Hyderabad.

3. RESULTS AND DISCUSSIONS

After a critical study with the relevant literature (Sarojinidevi2017), the collected specimens were identified as *Euphorbia venkatarajui* Sarojin. A scrutiny of literature has revealed that identified species has not been reported from Telangana state (Pullaiah, 2015; Reddy & Reddy, 2016). As a result, the current distribution of this species in Telangana state represents a new distributional record.

4. TAXONOMIC TREATMENT

Type specimen

India. Andhra Pradesh, Kurnool District, Yaganti village, in scrub jungle and rocky hillocks, 255 m 15°20'53.5"N, 78°08'26.8"E; 8 Jun 2016 (lvs.) Naidu Sarojinidevi 31438 (holotype: SKU, isotypes: BSID, CAL, MH; epitype: from the same location 24 Feb 2016 (fl.), Naidu Sarojinidevi 31437 SKU, BSID, CAL, MH).

Description

Erect, fleshy, compact cushion-like, 1.5 m tall shrub; branches cylindrical, 2.8 cm in diameter, green; podaria conical 1.0–1.2 cm long, closely and spirally arranged on the stem, with spines at the tip; spines paired, divaricated, 5–8 mm long, often with two 0.5 mm long spines above, rigid, reddish when young, blackish when mature., Leaves variable, sessile, spherical, ovate or slightly obovate, 0.5–0.8×0.3–0.5 cm, fleshy with prominent mid-nerve, rounded at base, slightly undulate along the margin, rounded to acute at apex, caducous. Cyathea in triads of axillary clusters or fascicles, yellowish to pink; peduncles 0.4–1.2 cm long; bracts opposite, broadly triangular; involucre cupular, 3–5×2–3 mm; lobes 5, broadly cuneate, fimbriate at apex; glands 5, transversely oblong, yellow. Staminate florets: 5 or 8 flowers in each; pedicels ca 1 mm long; anthers sub-globose; bracteoles ca 1.5 mm long, broad, lacinate at apex, covering florets. Pistillate florets: gynophores ca 1.5 mm long, curved; perianth lobes 3, triangular; ovary trigonous, styles connate up to middle; stigma papillose. Capsule trilobed, 1cm in diameter, glabrous, pinkish; cocci curved, obtusely keeled. Seeds ovoid to globose, 2.5×3.0 mm, brownish black, glabrous, smooth with a ventral line; caruncle minute (Fig.1)

Flowering & Fruiting:

February – May.

Distribution

Eastern Ghats, Kurnool District, Andhra Pradesh (Sarojinidevi 2017) and present report from Nalgonda district, Telangana State.

Ecology

Dry localities of rocky areas with associations of *Cissus quadrangularis* L.,

Acalypha alnifolia J.G. Klein ex Willd., *Euphorbia antiquorum* L, *Caralluma adscendens* (Roxb.) Haw, *Prosopis juliflora* (Sw.) DC.

Specimen examined:

Nalgonda District, Telangana State, Damaracherla mandal, Wazirabad Village. 23.05.2021, G. Ravi 240 (AINPVPM).

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Author contribution:

Specimen was collected by first and second author, photo plate and draft preparation was done by 3rd and 4th author.

Ethical approval

The ethical guidelines for plants & plant materials are followed in the study for species collection & identification.

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Conflicts of interest:

The authors declare no conflict of interest.

Data and materials availability

All data associated with this study are present in the paper.

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